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WESTERN BIRDS

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POPULATION FLUCTUATION IN A YELLOW-HEADED BLACKBIRD MARSH

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The breeding ecology of the Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*) has been well studied by Willson and Orians (1963) and Willson (1966) and the information presented in this study essentially agrees with their findings. In our study the number of nests, active and inactive, found in 1973 was tenfold greater than that found in 1972 and in 1974 it was fifty percent greater than in 1973. We would like to propose explanations for these different rates of increase in nest building in three consecutive years in the same habitat.

STUDY AREA AND METHODS

The area studied is a marsh 300 m north of the Eagle Lake Field Station on the east shore of Eagle Lake, Lassen County, California. The area immediately surrounding the marsh is flat with sandy, alkali soil. Basin Sage Brush (*Artemisia tridentata*), rabbitbrush (*Chrysothamnus nauseosus*) and Downy Brome (*Bromus tectorum*) are the most abundant plants surrounding the marsh for at least 100 m in all directions. Bullrush (*Scirpus* sp.) and rushes (*Juncus* sp.) are the dominant emergent vegetation. The marsh has been in existence for only eight years. It was created by a rising water table (R. Ediger pers. comm.) and has been increasing in size each year.

Observations on the Yellow-headed Blackbird began in May, but most of the field work was done during the periods of 18 June to 24 July 1972 (Walk 1972), 20 June to 20 July 1973 and 20 June to 22 July

1974. The behavior of the birds was observed almost daily during these periods.

We marked each nest in the study area with a numbered tag and visited them every two days subsequently. We banded the nestlings immediately after hatching or as soon afterward as possible. Body weights of the nestlings and lengths of their longest primary were taken at each visit.

We made line transects at 25 m intervals to measure the abundance and density of the emergent vegetation.

TERRITORIES AND NESTS

Male birds begin to arrive in late April and early May, and almost immediately begin to establish territories. The males are polygynous, having 2-5 females, the number being related to the size, location and vegetational features of the territory (Willson 1966). The total adult population was estimated at 25 birds in 1972, 85 in 1973 and 83 in 1974.

The females built their nests in rushes where there were 108-180 reeds per m^2. Eight to 70 reed stalks were incorporated into each nest. Nests supported by *Juncus* required at least five times as many individual plants as those supported by the larger, stronger *Scirpus*. Table 2 lists additional information on nest structure.

We did not measure territory size in 1972, but they ranged in area from 40.4 to 101 m^2 in 1973 and 50 to 150 m^2 in 1974. These are small territories for this species (Willson 1966, Fautin 1940) but are comparable to those found on Willson's study at Ramer Lake in 1963. She explains that the dense population and smaller territories might be possible because the major food was found elsewhere. This was apparently true in this study since the males were regularly seen flying to Eagle Lake's shoreline to feed, a distance of 200 m to 1 km or more.

Table 1. Yellow-headed Blackbird nesting data, Eagle Lake Field Station, California.

	1972	1973	1974
Number of active nests	8	29	19
Number of inactive nests	0	67	110
Total nests found	8	96	129
Average clutch size	3.0	3.0	2.7
Number of young fledging	Unknown	47	32
Mortality	Unknown	38%	37%
Average number of young fledged per nest	Unknown	1.6	1.7

Table 2. Yellow-headed Blackbird nest structure, Eagle Lake Field Station, California.

	1973	1974
Average nest height	21 cm	17 cm
Average nest diameter (outside)	15 cm	14 cm
Average nest depth	5 cm	5 cm
Average height above water (to bottom of nest)	38 cm	30 cm
Average distance between nests	5.1 m	8.3 m

CLUTCH SIZE

Table 1 gives nesting data for the years 1972-1974. Only 8 nests, all active, were found in 1972. In 1973 and 1974 many more nests were found, but most were inactive. Only 29 were active in 1973 and 19 in 1974 although respective totals of 96 and 129 completed nests were located; the remainder were not used. The average clutch size was approximately 3 for all years. This appears to be somewhat small compared to other studies (Roberts 1909, Fautin 1940, Willson 1966). In 1972 all young of the small population of 8 nests were fledged by July but most nests were quite active at this same time in 1973 and 1974.

GROWTH RATES AND MORTALITY

The young weighed 5-8 g at birth and averaged a weight increase of 5 grams/day. Willson (1966) found that males gain weight at a somewhat faster rate (7.1 g/day) than females (4.6 g/day). We found that the rate of elongation of the 10th primary was slower than the rate of weight gain; the nestlings added an average of 5 mm in primary length per day.

The incubation period ranged from 12-13 days and the period spent in the nest by young was 10-12 days. Table 1 shows nest success and mortality data. Known mortalities were due to drowning, abandonment and starvation, strangulation in reeds, and failure to hatch. Other eggs and young disappeared due to unknown reasons, possibly predation by Raccoons (*Procyon lotor*) (Walk 1972). The weather was very mild during the entire study in 1972 and 1973 but there were 3 days of heavy rains in 1974 which apparently caused several nests to topple.

DISCUSSION

What caused the dramatic increase in nests and adult birds from 1972 to 1973? The only factor that was considerably different between the

two years was the water depth of the marsh. The average depth of the marsh in 1973 was 0.78 m, while in 1972 it was over 1 m. This decrease in depth and increase in amount of emergent vegetation due to successional processes resulted in a much more widespread and denser growth of the emergent vegetation, both *Scirpus* and *Juncus*. This growth provided many more nest sites than were available in 1972. The populations of the other birds (Killdeer, *Charadrius vociferus*; American Avocet, *Recurvirostra americana*; Spotted Sandpiper, *Actitis macularia*; Wilson's Phalarope, *Steganopus tricolor*; Black Tern, *Chlidonias niger*; and Blue-winged Teal, *Anas discors*) which nested in or on the edges of the marsh were similar for the two years, so interspecific competition for nest sites as an explanation seems unlikely. Interspecific competition for food also seems improbable due to different feeding habits.

In 1974 the marsh was about 5.3 hectares in size, versus about 4 hectares in 1972 and 1973. This increase was undoubtedly due to the rise in the water table and increased rainfall (P. Maslin pers. comm.). In addition a "late" spring in 1974 (pers. obs.) retarded plant growth.

The increased average water depth (1.1 m) and delayed vegetation growth made it necessary for the birds to utilize thinner, shorter stalks of *Scirpus* and *Juncus* than would usually be present. Most of the nests were built in *Juncus* which grew in shallower water than *Scirpus*, much of which was too short to support nests at the beginning of the nesting period. The weaker *Juncus* collapsed in many instances (37% of all nests found). So although the marsh was larger, the increased water depth in part delayed plant growth, making fewer suitable nest sites available. Even though there were more nests built in 1974 than 1973, only 19 were active in 1974 versus 29 in 1973.

Many of these additional nests could have been due to nesting attempts which failed or frustration nests (nests built but unused). The nesting area was visited several times before the onset of the study and no eggs or incubation behavior was noted so it appears that most of these nests were frustration nests.

The similarity of population sizes of adult birds in 1973 (85) and 1974 (83) indicates that the marsh habitat may have temporarily reached its capacity to support a breeding blackbird population. Perhaps with more favorable weather and consequently faster plant growth and more nesting sites, more adults could have nested in the marsh in 1974. The larger territory size in 1974 indicates poorer quality territories than in 1973.

CONCLUSIONS

It appears that the enormous increase in size of the blackbird colony from 1972 to 1973 was likely due to the increasing plant colonization

of the marsh by natural succession, thereby providing additional nesting sites. Other possibilities are: 1) more birds discovering the suitable habitat; and/or 2) previous nesters and their young returning to the marsh. From 1973 to 1974 a smaller increase was noted, possibly due to the following: 1) the potential of the marsh in terms of number of nesting sites was being fulfilled, 2) high water and cooler weather delayed plant maturation, thereby producing fewer nest sites, and 3) many nests were built but not used.

The number of blackbirds nesting in any colony is greatly influenced, if not controlled by, the availability of potential nest sites. The number of nest sites is influenced by water depth, weather and habitat size. Cool weather and high water at the onset of breeding season delays plant maturation, allowing fewer sites. Warmer weather and shallower water provide more sites at the appropriate time.

Since the study has only been made for three consecutive years and the weather has been somewhat different each year, no definite patterns have emerged. There is another large colony of Yellow-headed Blackbirds on the opposite side of Eagle Lake (Crase and DeHaven 1972). It is possible that population sizes in these two colonies is interdependent, i.e., the density of the population in one marsh may be dependent on the suitability of the other for nesting. Additionally, the number of adults arriving in either may be influenced by the degree of previous breeding success in the other. A simultaneous study of both marsh habitats over several years would prove interesting.

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Sketch by Franz Cilensek

STATUS OF THE YELLOW-BILLED LOON (*GAVIA ADAMSII*) IN THE WESTERN UNITED STATES AND MEXICO

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Current knowledge of the breeding range, dispersal routes, and wintering range of the Yellow-billed Loon (*Gavia adamsii*) is summarized by Burn and Mather (1974). However, neither these authors nor the AOU Check-list (1957) cite acceptable records for Mexico or the contiguous western United States. The purpose of this paper is to enumerate and analyze the 52 records that have been obtained from this area during the last 19 years. The problems of distinguishing this species from the Common Loon (*Gavia immer*) in the field and hand are discussed by Binford and Remsen (1974) and Burn and Mather (1974).

GEOGRAPHIC DISTRIBUTION

The 52 records that we consider acceptable through August 1974 are distributed as follows: Washington, 26 (0 represented by museum specimens, 5 others by photographs, and 21 by sight records only); Oregon, 3 (0, 1, 2); California, 20 (3, 3, 14); Nevada, 1 (0, 0, 1); and Baja California, 2 (1, 0, 1). These records are listed in Appendix A. Additional published records for which substantiating details are either inadequate or not available are presented in Appendix B.

The vast majority (84.6%) of records between the British Columbia border and northern Baja California are from two regions: central California and the area embracing Puget Sound and the Straits of Georgia and Juan de Fuca, Washington (see Summaries of Distribution Within States). This rather spotty distribution probably is largely a result of uneven coverage by observers. We have examined the supposed *adamsii* specimen from Colorado and find that it is a typical example of *G. immer* (see Appendix B), leaving the Nevada sighting as the only inland occurrence for the contiguous United States. The record from near San Felipe, Baja California is the southernmost for the species in North America (Simon and Simon 1974).

SEASONAL DISTRIBUTION

Forty-eight of the 52 records are for the period 20 October-4 May. The remaining four records, one each for Washington, Oregon, California, and Baja California, extend from 14 June through 15 July. Because the other three species of loons summer in small numbers along the coast (Grinnell and Miller 1944, McCaskie and DeBenedictis 1966, Jewett et al. 1953), the occurrence of Yellow-billed Loons in summer is not surprising.

The 46 non-summer records from Washington, Oregon, and California are plotted in a seasonal chart (Figure 1). A comparison of dates on which birds were first discovered discloses the following trend: 66.7% of Washington-Oregon birds arrived between 2 November and 17 January and the remaining 33.3% between 7 March and 22 April, with none in the intervening seven weeks. The average arrival dates for fall and spring were 9 December and 22 March. Only three of eighteen (16.7%) Washington birds and no Oregon birds overwintered. In California, on the other hand, only 21.1% of the birds were discovered prior to 29 December, 73.7% from 29 December to 26 January, one bird in mid-February, and none in March or April. The six-day period 21-26 January alone produced 47.4% of all California discoveries. The average "fall" arrival date was 3 January.

The most likely explanation for this difference in seasonal pattern between the two areas is that fall migrants usually do not overwinter in Washington and Oregon but by late January have moved farther south into California (and Baja California), where they arrive sometimes as early as 20 October but principally in late January. Beginning in late February and extending into early May, the wintering birds leave California and move north again, migrating through coastal Washington and Oregon primarily in March. All three of the Washington wintering birds apparently left during this period, one in late February and two in April. Wayne C. Weber (pers. comm.) of Vancouver states that in March and early April a similar spring migration takes place in southwestern British Columbia.

Although not supported by direct evidence, such as movements of marked individuals, this explanation seems to be the most plausible one to fit the available data. Mr. Weber, however, feels that more birds winter in the Puget Sound-Straits of Georgia area than in California, and that the discrepancy in winter abundance between Washington and California might be due to the greater number of active birders in the latter state. There are, in fact, a number of February records for southwestern British Columbia, and almost certainly the paucity of records from Oregon and coastal southern Washington reflects the low numbers of observers in those areas. We believe, however, that the number of observers affects only the absolute number of records, whereas the relative pro-

portion of records in the different time periods reflects a true pattern in seasonal distribution.

The only Yellow-billed Loon discovered in California after 26 January was on 18 February in Humboldt County, at least 180 miles north of the localities that have produced all other California records. This bird, which was last seen on 7 March, might have been on its way north

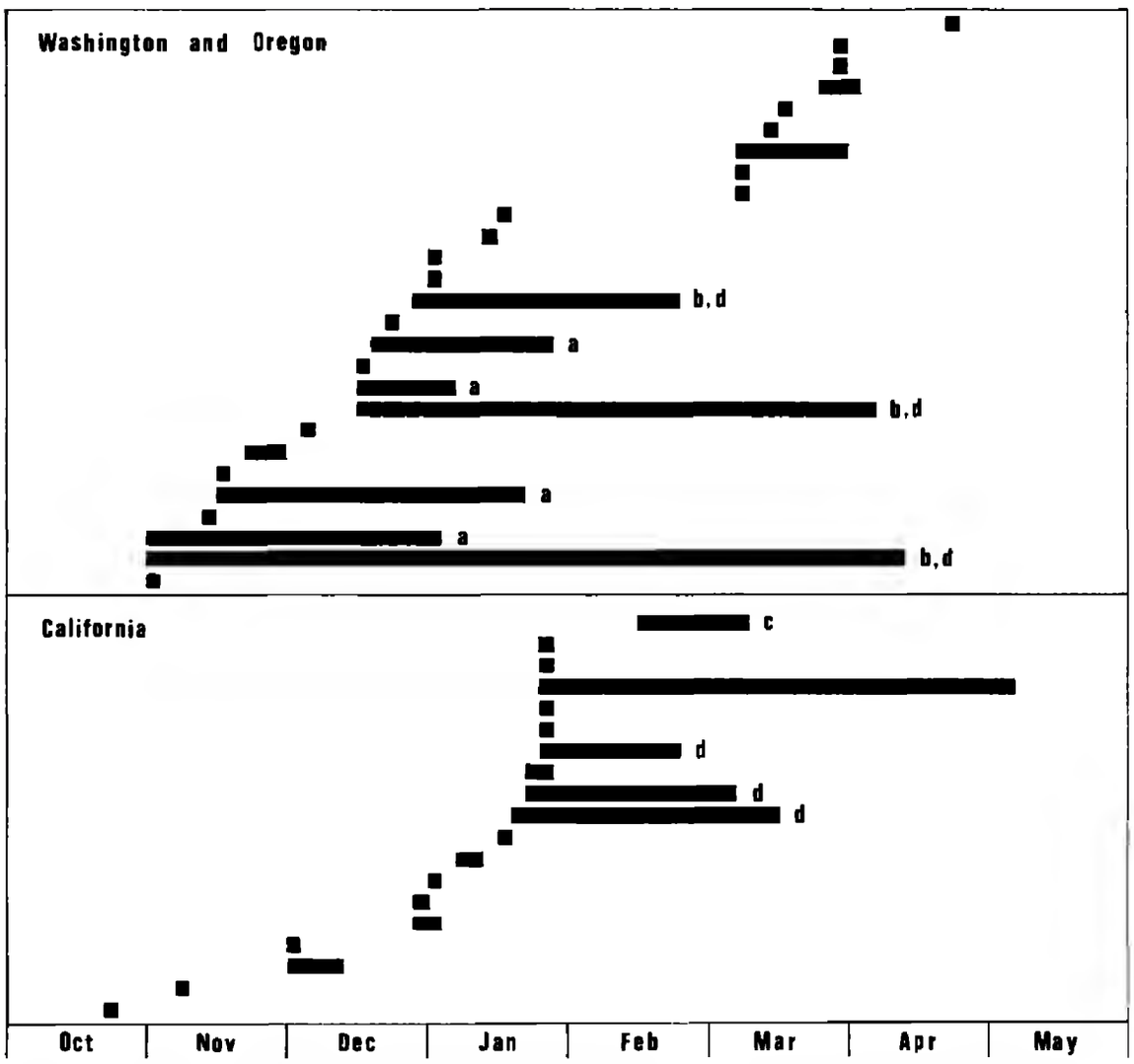

Figure 1. Seasonal distribution of the Yellow-billed Loon in California and the Washington-Oregon area. Each line represents the period of occurrence, plotted in three-day intervals, for one of the 46 birds recorded from October to May. See text for discussion and Appendix A for specific data. Compare the Washington-Oregon area to California and note the following: the earlier arrival, on the average, in Washington-Oregon; in January, the sudden cessation of arrivals and exodus of temporary fall visitants (each labeled "a" in figure) in Washington-Oregon, and the ensuing increase of arrivals in California; the scarcity of overwintering birds (b) in Washington-Oregon, and the failure of California birds discovered before mid-January to overwinter; the discrete cluster of spring transient migrants in Washington-Oregon, the paucity thereof (c) in California, and the nearly simultaneous departure of most overwintering birds (d) from both areas (generally earlier in California).

after wintering farther south and would have been expected to pass through Humboldt County about that time—slightly earlier than the first northbound birds are detected in Washington and Oregon (early March). Thus the Humboldt record probably supports our interpretation of seasonal distribution. [The only other Humboldt County bird, present from 23 February to 7 March 1975 (D. Erickson pers. comm.), beyond the cut-off date for records analyzed in this paper, also fits this pattern.]

The discovery of two birds in Baja California, despite the scarcity of observers there, suggests that south of central California Yellow-billed Loons may be more regular than supposed. Furthermore, California birds arriving prior to 17 January are not known to have remained for more than 11 days and thus may represent transient migrants that winter in Baja California. This is further suggested by the earliness of the only winter-period record for Baja, 24 November, which is 15 days earlier than the average arrival date for Washington-Oregon. Surprisingly, however, not a single bird has been recorded in southern California, a very thoroughly birded area, nor have any returning spring transients been recorded in central California.

The only Nevada bird was found at Lake Tahoe on 6 January (1973). Because this date is only three days beyond the average fall arrival date for California, and because at this latitude no California bird has commenced overwintering prior to 17 January, the Nevada bird seems to fit the general seasonal pattern as a fall transient migrant.

SUMMARIES OF DISTRIBUTION WITHIN STATES

Washington: rare but regular transient migrant (2 Nov.-26 Jan.; 7 Mar.-22 Apr.; average arrival dates, 9 Dec. and 22 Mar.); casual winter resident (three records); casual in summer (one record). All but one record are from the area embracing Puget Sound and the Straits of Georgia and Juan de Fuca, but this is almost certainly a result of the concentration of observers there.

Oregon: two March records; casual in summer (one record). The paucity of records is probably the result of the scarcity of observers in coastal areas. We predict that more thorough coverage will demonstrate a distribution extending along the entire coast and a seasonal status similar to that in Washington.

California: very rare but regular winter resident (20 Oct.-4 May; average "fall" arrival date, 3 Jan.); records concentrated in late January; birds arriving before 17 January are not known to winter and thus may be transient migrants; casual in summer (one record). All records, except one from Humboldt Bay, are for central California from Sonoma County to Monterey County.

Baja California: casual in fall (one record) and summer (one record). Both records are from extreme northern Baja, one each from the Pacific Ocean and the Gulf of California.

Nevada: accidental (one January record for Lake Tahoe that may represent a "fall" transient migrant).

COMPARISON BETWEEN YEARS

Prior to the winter of 1967-68, only three Yellow-billed Loons had been noted in the area with which we are concerned: one each in the winters of 1956-57, 1963-64, and 1964-65, all in Washington. In the seven winters from 1967-68 to 1973-74, however, 45 birds were recorded (Table 1), with an additional four summer occurrences. Some observers (e.g. Small 1974) feel that the species had been previously overlooked and that the abrupt surge in records in recent years is only a function of the increase in number of observers and their sudden alertness, after the original discoveries, to the possible presence and field marks of the species. Others, including ourselves, feel that this recent increase does in fact reflect a true change in status for the following reasons: (1) observers in the Pacific Northwest have always looked for this species (J. B. Crowell, Jr. pers. comm.); (2) the increase in records in both California and Washington began in the same winter, 1967-68; and (3) this species probably could not have been overlooked in the past in such thoroughly covered California localities as Monterey harbor, Moss Landing, Tomales Bay, and Bodega Bay. This question, however, cannot be answered with certainty at this time.

Table 1. Annual occurrence of the Yellow-billed Loon in the western United States and Mexico. Numbers of records are listed by locality for seven winter periods (October-May), 1967-1974.

WINTER	WASH.	ORE.	CALIF.	NEV.	BAJA CALIF.	TOTAL
1967-68	2	-	2	-	-	4
1968-69	1	2	5	-	1	9
1969-70	1	-	1	-	-	2
1970-71	4	-	4	-	-	8
1971-72	2	-	2	-	-	4
1972-73	5	-	3	1	-	9
1973-74	7	-	2	-	-	9

A comparison of the total number of records for each of the last seven winter periods (Table 1) suggests this species has "good winters" and "bad winters." Although perhaps real, this trend cannot be statistically tested with such low sample sizes.

HABITAT PREFERENCES

Habitat utilization by the Yellow-billed Loon in the western United States and Mexico is indicated in Table 2. This species shows a preference for very sheltered waters (58.3% of all observations), such as Tomales Bay and Monterey harbor, and moderately sheltered waters (31.2%) such as Puget Sound, Monterey Bay, and the Gulf of California. This distribution is similar to that shown by Common and Red-throated (*Gavia stellata*) loons but contrasts with that of the Arctic Loon (*G. arctica*), which in winter is primarily a deep-water species that often feeds in rafts one to five miles offshore (pers. obs.).

Although we have no quantitative data available, our impression is that the Yellow-billed Loon prefers shallower water than the Common Loon. The same trend has been noted by W. C. Weber (pers. comm.) in the Vancouver area, but not by observers in Bellingham, Washington (T. R. Wahl pers. comm.). Within a pair of closely related species, the tendency for the one with the more upturned bill to be found in shallower water is also seen in the Red-throated and Arctic loons and the Eared

Table 2. Habitat preferences of the Yellow-billed Loon in the western United States and Mexico. Numbers of records are listed by locality for each habitat.

HABITAT	WASH.	ORE.	CALIF.	NEV.	BAJA CALIF.	TOTAL	% TOTAL
Ocean more than one mile offshore	1	-	-	-	1	2	4.2
Exposed ocean coast	-	-	1	-	-	1	2.1
Moderately sheltered waters (sounds, gulfs, and exposed bays)	12	-	2	-	1	15	31.2
Very sheltered waters (unexposed bays, river mouths, estuaries and harbors)	8	3	17	-	-	28	58.3
Lakes	1	-	-	1	-	2	4.2

and Horned grebes (Storer 1960, Binford and Remsen pers. obs.). Presumably the upturned bill facilitates benthic feeding, i.e. scraping an item from a substrate (Jehl 1970). Spring (1971) shows that in contrast to the Common Murre (*Uria aalge*), which feeds in open water, the Thick-billed Murre (*U. lomvia*) is primarily a bottom feeder and has the more upturned lower mandible.

SEX RATIO

Of the eight *adamsii* specimens taken in Britain (Burn and Mather 1974), one in Baja California (Jehl 1970), and three in California, all are females. Because the probability of drawing 12 straight females by chance from a population with an equal sex ratio is virtually zero, the preponderance of females must be real. Two possible explanations—that the sex ratio in the total population very strongly favors females or that the mortality rate in these southern areas is higher for females—seem to us very unlikely. Rather, we postulate that females winter, or at least wander, farther south than males. Page et al. (1972) have demonstrated that in the Western Sandpiper (*Calidris mauri*) females outnumber males at the southern extremities of the species' range.

MORTALITY

In California three out of the 20 (15%) Yellow-billed Loons were seen alive but later found dead, and several others appeared to be sick. Burn and Mather (1974) report that 20 of the 39 (51.3%) British records were of dead or dying birds. Such rates of unhealthiness seem much higher than would be considered normal and indicate that conditions in these southern waters are not conducive to survival. Support for this speculation is provided by the only available datum on cause of death. The first specimen for California was autopsied by Dr. Bernice Eddie of the George William Hooper Foundation, University of California Medical Center, San Francisco, and found to have died of aspergillosis (*Aspergillus* sp.), a respiratory disease especially prevalent among water birds. This is apparently the first report of aspergillosis in the Yellow-billed Loon (see O'Meara and Witter 1971). Perhaps there is a higher incidence of, or greater susceptibility to, aspergillosis or other diseases in the warmer, more polluted southern areas than in the colder, cleaner arctic regions that this species normally inhabits. If such is the case, disease could be a major factor in determining the southern limits of the ranges of this loon and certain other arctic water birds. Similar high rates of mortality are indicated by Yadon (1970) for the Thick-

billed Murre and by Grinnell and Miller (1944) for the Horned Puffin (*Fratercula corniculata*) and Parakeet Auklet (*Cyclorrhynchus psittacula*), all of which are only stragglers as far south as California. However, the distinct movement of spring migrant Yellow-billed Loons through Oregon, Washington, and southwestern British Columbia indicates that wintering to the south is not always fatal.

SUMMARY

Fifty-two Yellow-billed Loon records, including four specimens, have been obtained from the western United States and Mexico since 1956 (Washington, 26; Oregon, 3; California, 20; Nevada, 1; and Baja California, 2). Records extend from 20 October to 4 May, with an additional four in summer. This species is a very rare but regular winter resident in central California but seems to be primarily a transient migrant in Washington, Oregon, and northern California. The only Colorado record proves to be a Common Loon, leaving the Nevada sighting as the only inland record south of Canada. The San Felipe, Baja California record is the southernmost for the species in North America. The surge of records beginning in the winter of 1967-68 suggests that the Yellow-billed Loon is extending its range southward. Most records (89.5%) are for moderately to very sheltered waters. That all twelve specimens from California, Baja California, and Britain are females suggests that females winter or wander farther south than males. The abnormally high rates of mortality and sickness, including one fatal case of aspergillosis, suggest that disease may be a proximate factor delimiting the southern range of this and other arctic water birds.

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tain other records. David DeSante generously allowed us to publish his Nevada record. Betsy Webb, of the Denver Museum of Natural History, made available the Colorado specimen thought to be a Yellow-billed Loon.

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APPENDIX A. Acceptable records of the Yellow-billed Loon from the western United States and Mexico. Each record is designated according to its supporting evidence as follows: (1) MS = museum specimen; (2) P = photograph but no specimen; and (3) SR = sight record for which there are written details but no photograph or specimen. Each of these designations is modified as follows: (a) evidence examined by one or both of us; or (b) evidence not examined by us but by a professional ornithologist, Regional Editor of *American Birds* (formerly *Audubon Field Notes*), or Terence R. Wahl of Bellingham, Washington, who has field experience with this species. Records are listed chronologically by county. For birds recorded on more than one day, only the first and last dates are given; for specimens, the last date given is the day of collection.

WASHINGTON

Clallam Co. P(a) 27 Mar.-3 Apr. 1971 (not 26 Mar. as in Crowell and Nehls 1971); Ediz Hook; photographed by D. R. Paulson and D. L. Pearson (Wahl pers. comm.). SR(b) 14 Jul. 1974; Neah Bay (Crowell and Nehls 1974); seen by S. Wilson and J. Wingfield.

Grays Harbor Co. SR(b) 17 Jan. 1971; Westport (Crowell and Nehls 1971); seen by G. Hoge and W. Hoge.

Jefferson Co. SR(b) 6 Dec. 1969; Hood's Canal (Crowell and Nehls 1970); seen by B. Evans, P. Evans, D. Lindstrom, J. Rathfelder, R. Rathfelder et al. (Wahl pers. comm.). SR(b) 22 Apr. 1973; Admiralty Inlet, east of Port Townsend (Crowell and Nehls 1973b); seen by A. Benedict. SR(b) 18 Nov. 1973; Hood's Canal; seen by B. Evans and P. Evans (Wahl pers. comm.).

King Co. SR(a) 23 Dec. 1956; Seward Park, Seattle; seen by Z. Schultz et al. (Schultz 1970); although the details published by Schultz are not in themselves convincing, her reputation as a careful and competent field observer and verbal descriptions to T. R. Wahl and others have led most field observers in Washington to regard this as the first state record.

Mason Co. SR(b) 16 Mar. 1974; Shelton; seen by G. Hoge and W. Hoge (Crowell pers. comm.).

San Juan Co. SR(a) 18 Dec. 1971; near Stuart Is., San Juan Islands; seen by R. Russell (Russell 1972 and pers. comm.). P(b) 17 Dec. 1972-early Jan. 1973; Friday Harbor; seen by J. Duemmel and D. Heinemann and photographed by the latter (Wahl pers. comm.).

Skagit Co. SR(b) 28 Mar. 1969; Deception Pass (Crowell and Nehls 1969); seen by D. S. Payne. SR(b) 17 Dec. 1972-6 Apr. 1973; seen by E. Hunn, N. Lavers et al. (Crowell and Nehls 1973b, Wahl pers. comm.). SR(b) 7-8 Mar. 1973; Samish Is.; seen by N. Lavers and C. Lavers (Wahl pers. comm.). SR(b) 31 Mar. 1974; Samish Is.; seen by N. Lavers (Wahl pers. comm.).

Thurston Co. SR(b) 24-30 Nov. 1973; Eld Inlet, 10 miles north of Olympia; seen by B. Estes, G. Hoge and W. Hoge (Crowell pers. comm.).

Whatcom Co. Sr(b) 21 Dec. 1963-26 Jan. 1964; Point Roberts (Boggs and Boggs 1964); seen by Mr. and Mrs. W. H. Hesse et al. SR(b) 15 Nov. 1964; Point Roberts; seen by T. R. Wahl (pers. comm.). SR(b) 14-15 Jan. 1968 (not 12-13 Jan. as given by Schultz 1970); Birch Bay; seen by Z. Schultz, E. Grahlfs, E. Stopps, D. S. Payne and T. R. Wahl; presumed by Crowell and Nehls (1968) to be same bird as the one seen 9-30 Mar. 1968 but probably not (Wahl pers. comm.). P(a) 9-30 Mar. 1968; Bellingham; found and photographed by D. S. Payne (Wahl pers. comm); see cover photo Aud. Field Notes 22(3) 1968. P(b) 31 Dec. 1970-

22 Feb. 1971; South Bellingham; found by J. Duemmel and photographed by T. R. Wahl (pers. comm.). SR(b) 3 Jan. 1971; Sandy Point; seen by E. W. Stiles (Wahl pers. comm.). SR(b) 2 Jan. 1972; Bellingham (Crowell and Nehls 1972a); seen by T. R. Wahl. SR(b) 2 Nov. 1972; Blaine (Crowell and Nehls 1973a); seen by D. R. Paulson. P(a) 3 Nov. 1973-1 Jan. 1974; South Bellingham; found and photographed by T. R. Wahl (pers. comm.). SR(a) 3 Nov. 1973-12 Apr. 1974; Point Roberts; found by R. Phillips and also seen by D. Heinemann, W. H. Hesse, B. A. MacDonald, D. L. Pearson, A. Small, T. R. Wahl, W. C. Weber et al. (Wahl pers. comm., Weber pers. comm.). SR(b) 17 Nov. 1973-19 Jan. 1974; South Bellingham; different individual from that found on 3 Nov. 1973; found by T. R. Wahl and seen by many others (Wahl pers. comm.).

CALIFORNIA

Alameda Co. SR(a) 3 Dec. 1972; Alameda beach; seen by J. Morlan and E. Roemer (Homem 1972a, Morlan pers. comm.). P(a) 26 Jan. 1973; Berkeley Pier (DeSante et al. 1973); found and photographed by C. Maynard.

Humboldt Co. SR(a) 18 Feb.-7 Mar. 1973; Humboldt Bay (DeSante et al. 1973); found by R. LeValley and also seen by D. Erickson, S. W. Harris, T. Schulenberg et al.

Marin Co. MS(a) 1-11 Dec. 1967 (not 12 Dec. as published by Chandik and Baldridge 1968); Inverness, Tomales Bay; found by G. Brady and seen by many until 11 Dec. when found dead by G. Miller (pers. comm.); California Academy of Sciences No. 65864; female. SR(b) 1 Jan. 1968; Pierce Point, Tomales Bay (Chandik and Baldridge 1968); seen by R. Stallcup. SR(b) 25 Jan. 1971; Inverness, Tomales Bay (DeSante and Wang 1971); seen by R. Stallcup.

Monterey Co. MS(b) 29 Dec. 1968-1 Jan. 1969; Monterey harbor (Baldridge and Chandik 1969); found by R. Greenberg and R. Griswold and also seen by L. C. Binford, T. Chandik et al.; Pacific Grove Museum of Natural History No. 2348; female. SR(a) 22-26 Jan. 1969; Pacific Grove (Baldridge and Chandik 1969, Remsen field notes); found by A. Baldridge and also seen by L. C. Binford, T. Chandik, D. DeSante, J. Greenberg, R. Greenberg, J. V. Remsen et al. P(a) 25 Jan.-22 Feb. 1969; Monterey harbor (Baldridge and Chandik 1969); found and photographed by A. Baldridge and also seen by R. L. Branson, A. Craig, J. Craig, D. DeSante, P. Devillers, G. McCaskie, W. Reese, J. V. Remsen, G. S. Suffel, V. L. Yadon et al. SR(b) 25 Jan. 1969; Moss Landing (Baldridge and Chandik 1969); seen by J. Greenberg and R. Greenberg. SR(a) 29 Dec. 1969; Point Joe (Baldridge and Chandik 1970); seen by A. Baldridge, D. DeSante and R. LeValley from a boat one-half mile offshore. MS(a) 23 Jan.-6 Mar. 1971; Moss Landing (DeSante and Wang 1971); found by J. Greenberg and R. Greenberg and seen by many until 6 Mar. when found dead by H. L. Jones; Museum of Vertebrate Zoology No. 162350; female. SR(b) 26 Jan. 1971; Moss Landing (DeSante and Wang 1971); seen by R. Stallcup and D. A. Gaines; a different individual from that on 23 Jan-6 Mar. 1971, which was also seen on the same day by Stallcup and Gaines. SR(a) 21 Jan.-15 Mar. 1972; Pacific Grove (DeSante and LeValley 1972); found by A. Baldridge and R. Stallcup and also seen by S. F. Bailey, D. DeSante, G. S. Keith, R. LeValley, J. V. Remsen, A. Small et al. SR(a) 26 Jan.-4 May 1972; Monterey harbor area (DeSante and LeValley 1972a, 1972b; Suffel pers. comm.; McCaskie pers. comm.); found by G. S. Suffel and also seen by A. Baldridge, G. McCaskie and R. Stallcup; possibly more than one bird involved. SR(a) 10 Nov. 1973; Monterey harbor (Remsen and Gaines 1974); seen by L. C. Binford, J. Greenberg, P. Greenberg and W. McLeod. SR(a) 9-10 Jan. 1974; Monterey harbor (Stallcup

and Greenberg 1974, Suffel pers. comm.); found by A. Baldridge and also seen by W. Anderson, H. L. Jones, P. Metropulos, G. S. Suffel, V. L. Yadon et al.; this bird is considered to be a different individual from that on 10 Nov. 1973 because the harbor and surrounding area were searched many times without success between the two sightings.

San Mateo Co. SR(a) 17-25 Jun. 1973. Princeton Harbor, Half Moon Bay (Remsen and Gaines 1973); found by L. C. Binford and J. V. Remsen and also seen by S. F. Bailey, B. G. Elliott, D. Roberson, S. Terrill et al.

Sonoma Co. P(b) 20 Oct. 1968; Bodega Bay (Chandik and Baldridge 1969); photographed by W. Anderson. SR(a) 17 Jan. 1971 (not 18 Jan. as in DeSante and Wang 1971); Bodega Bay; seen by B. Broadbooks (pers. comm.).

OREGON

Clatsop Co. SR(b) 8 Mar. 1969; Columbia River mouth (Crowell and Nehls 1969); seen by M. Konindyke and H. B. Nehls.

Coos Co. P(a) 15 Jul. 1972; Coos Bay (Crowell and Nehls 1972b; includes photograph); found and photographed by P. A. Buckley.

Tillamook Co. SR(b) 15 Mar. 1969; Tillamook River mouth (Crowell and Nehls 1969); seen by J. B. Crowell, Jr. and S. Janes.

NEVADA

Washoe Co. SR(a) 6 Jan. 1973; Incline Village, Lake Tahoe; seen by D. DeSante and J. Farness (DeSante pers. comm.); previously unpublished; excellent substantiating details are on file with us and the Regional Editors of *American Birds* (Middle Pacific Coast Region).

BAJA CALIFORNIA, MEXICO

MS(b) 24 Nov. 1968; Los Coronados Islands; San Diego Natural History Museum No. 36831; juvenal female (Jehl 1970). SR(a) 30 Jun. 1973; nine miles south of San Felipe on the Gulf of California; seen by D. Simon and W. F. Simon (Simon and Simon 1974).

APPENDIX B. Published records of the Yellow-billed Loon from the western United States not considered acceptable at this time. We do not wish to contend that all of these records were not of Yellow-billed Loons, but only that the substantiating details are either inadequate or not available. See Appendix A for explanation of system employed.

CALIFORNIA

Humboldt Co. SR(a) 19-23 Mar. 1969; Big Lagoon (Yocum and Harris 1975); insufficient details. SR(a) 30 Dec. 1973-1 Jan. 1974; Humboldt Bay (Stallcup and Greenberg 1974, Yocum and Harris 1975); descriptions indicate Common Loon.

Marin Co. SR(a) 28 Apr. 1965; Stinson Beach (see Chandik and Baldridge 1968); insufficient details. SR(a) 4 Mar. 1969; Limantour Estero, Point Reyes National Seashore (Baldridge and Chandik 1969); insufficient details. SR(a) 1 Jan. 1973; Drake's Bay, Point Reyes National Seashore (Homem 1973); insufficient details.

Sonoma Co. SR(a) 26 Dec. 1970; Bodega Bay (McLean 1971); insufficient details. SR(b) 21 Jan. 1971; two birds; Bodega Bay (Homem 1971a); no details available. SR(a) 25 Feb. 1971; Bodega Bay (Homem 1971b); insufficient details. SR(b) 13 Feb. 1972; Bodega Bay (Homem 1972b); no details available. SR(a) 10 Dec. 1973; Bodega Bay (Stallcup and Greenberg 1974); insufficient details.

COLORADO

Adams Co. MS(a) 7 Nov. 1922; Brighton (Bailey and Lincoln 1954, A.O.U. Check-list 1957, Bailey and Niedrach 1965); Denver Museum of Natural History No. 7807, not 7808 as reported by Bailey and Niedrach (1965); we have examined this specimen and found it to be a typical *Gavia immer* in all characters.

NOTES

BOREAL OWL SIGHTING IN YELLOWSTONE NATIONAL PARK

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On 3 February 1974 at 1400 we located a Boreal Owl (*Aegolius funereus*) approximately 1 km northwest of Soda Butte in the Lamar Valley of northern Yellowstone National Park, Wyoming (44° 50′ N, 110° 10′ W). The sighting occurred in a fairly open stand of Douglas-fir (*Pseudotsuga menziesii*) and Lodgepole Pine (*Pinus contorta*). When first sighted the owl was perched on a dead limb 2 m above the ground, but later flew 10 m to a live Douglas-fir where it perched 4 m above the ground. Seemingly undisturbed by our presence, the owl allowed us to approach within 5 m to observe and photograph it for nearly an hour (Figure 1).

The only previous record of the Boreal Owl in Yellowstone Park was a dead bird found during the winter of 1951 (Arnold 1951). The one other Wyoming record is a sight record for December 1927 (McCreary 1937).

Of six apparently reliable Montana records, four were between September and February. Saunders (1921) reported a specimen taken in 1902 near Columbia Falls although the specimen is not now known to exist. A fresh road kill was discovered near Bozeman in September 1964. This specimen is presently in the Montana State University collection (Skaar 1969). In November 1959 a Boreal Owl was photographed repeatedly near Missoula (Hoffmann and Hand 1962). The remaining Montana records are sight records, the most recent being of 3 dependent young near the Canadian border in Glacier National Park in July 1973 (Rogers 1973).

Washington's only undisputed record is a specimen collected near Pullman 10 January 1974 (Rogers 1974).

Idaho records reveal only two specimens, both collected in the extreme northern portion of the state (Burleigh 1972).

Of five records which exist for Colorado, three are specimens collected in October and November (Bailey and Niedrach 1967). The fourth is a specimen which was found dead near Estes Park in April (Scott 1970). The fifth record, occurring in August, included two juveniles, one of which was collected (Baldwin and Koplin 1966).

The species' winter range as described by the AOU Check-list includes northern Montana and extends as far south as southern Idaho and Colorado. The breeding range covers much of northwestern Canada and Alaska, but nowhere extends as far south as the Rocky Mountain states (AOU 1957). However, Baldwin and Koplin (1966) cite the 14 August 1963 observation of two juveniles (one collected) in north-central Colorado as evidence of isolated breeding units considerably south of the species' normal breeding range. Bent's (1938) feeling that the species is relatively nonmigratory tends to support this view. This hypothesis gains further support from the findings of Voous (1960) that the Boreal Owl in Asia occurs in small disjunct breeding units south of the normal breeding range.

In light of the strong possibility that small, isolated breeding units of the Boreal Owl may exist south of the contiguous breeding range, all observations in the northern United States should be carefully documented.

Figure 1 Boreal Owl (*Aegolius funereus*) photographed 1 km northwest of Soda Butte in the Lamar Valley of northern Yellowstone National Park, Wyoming on 3 February 1974

Photo by Robert A. Garrott

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EFFECTIVENESS OF BROWN CREEPER'S CONCEALMENT BEHAVIOR

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During a study of the relationships between forest snags and cavity-nesting birds in the northern Rocky Mountains, I observed the effectiveness of the Brown Creeper's (*Certhia familiaris*) cryptic color pattern and behavioral response. The combination made the bird nearly undetectable near its nest site on an Engelmann Spruce (*Picea engelmannii*) snag. The nest tree was located on the Coram Experimental Forest, Flathead National Forest, northwestern Montana, at an elevation of 5350 feet.

The nest site was 27 feet above the ground in a totally dead snag 74 feet high with a D.B.H. of 17 inches. The snag still retained most of its branches and bark. On 18 June 1974 I had been observing adult creepers enter their nest, located in a cavity between the trunk of the tree and a section of partially detached bark. The birds were carrying food and apparently feeding young, though the latter were not seen or heard.

As I watched, an adult flew to the tree, landed several feet below the nest, and "hitched" toward the entrance. When suddenly startled by a slight movement of my leg, the bird immediately "froze" in a position in which its body and outstretched wings were pressed tightly against the tree. Its mottled color pattern blended perfectly with the scaly bark of the spruce. I took my eyes off the bird to ascertain how difficult it would have been to locate had I not been following its movement before it "froze". Several minutes were required to relocate the bird even though I was only 25 feet from the tree, was using 7x binoculars and knew the bird's relative position on the tree. The creeper remained in this stationary, perfectly camouflaged position for another five minutes, after which it continued on to its nest.

This observation appears to be an exception to Bent's (U.S. Natl. Mus. Bull. 195, 1948) view that the creeper does not seem to look upon man as a danger. This behavior pattern may be common during the nestling period. However, the creepers at another nest discovered in a Douglas-fir (*Pseudotsuga menziesii*) during the 1974 study never assumed the above-described position in response to my presence. This pair also appeared to be feeding young.

Brown Creeper nests are not easily located, because of their location (between bark and main stem) and the adult's behavior and cryptic color pattern. Bent (ibid.) describes the difficulty in locating creepers because of their inconspicuous color. One instance is cited wherein creepers rested in the shadows of limbs, thus adding to their concealment. He also cites an account by William Brewster describing the escape of a Brown Creeper that was being pursued by a shrike. The creeper flattened itself against the bark of a tree and avoided detection. Bradford Torrey, also cited by Bent (ibid.: 67) describes a similar defensive response of a creeper to the scream of a hawk. When the hawk screamed overhead, the creeper "flattened himself against the trunk spreading his wings to their very utmost and ducking his head," making him nearly impossible to detect.

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THE STATUS OF THE GRAY FLYCATCHER IN WASHINGTON STATE

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Larrison (1970) reported seeing on 31 May 1970 a bird with the field marks and song of the Gray Flycatcher (*Empidonax wrightii*) in a stand of Yellow Pines (*Pinus ponderosa*) in Wenas Park, 17 km north northwest of Naches, Yakima County, Washington. This undocumented sight record was the first report of the species in the state. On 13 June 1972 Terence R. Wahl closely observed a bird with the field marks of the Gray Flycatcher in the Columbia National Wildlife Refuge, near Othello, Adams County, in willows (*Salix*) surrounded by sagebrush (*Artemisia*) (Rogers 1972, T. R. Wahl pers. comm.). Between 26-30 May 1972 Yaich and Larrison (1973) observed and photographed a Gray Flycatcher at Wenas Park in a nest "some 6 feet from the ground at the base of one of the lowermost branches of a small pine tree." The nest contained two eggs. In a note appended to this report, Larrison described finding two more nests and an additional 10 Gray Flycatchers within 6 km of Wenas Park, 23-28 May 1973. These birds were mainly in Yellow Pine groves, though one nest was in willows. Larrison concluded "The species is apparently becoming established in at least this part of the yellow pine belt of the eastern Cascades in Washington."

The discovery Cheryl Lavers and I subsequently made of a small population of Gray Flycatchers with well grown fledglings in Klickitat County, near the southern border of the state, confirms successful nesting in Washington. More importantly, it begins to outline the distribution of the species in the state and suggests its point of origin from Oregon. Our observations are reported here in detail.

On 27 June 1973 near the Klickitat Wildlife Recreation Area headquarters midway on the Goldendale to Glenwood road, Klickitat County, our attention was caught by some strikingly pale pearl gray *Empidonax* flycatchers. An adult bird was feeding two well grown fledglings. The birds were in plain sight and very tame, completely ignoring us while we observed them through 7x35 binoculars from distances of 8 to 13 m. Lighting conditions were ideal. Here is our description, discussed and written up on the spot after 15 or 20 minutes of close study: Head and back, very pale, bright, pearl gray, with no admixture of olive or brown; tail, brownish; underparts white, or perhaps grayish around the breast, with no trace of yellowish; eyering and wingbars well marked and prominent; lower mandible prominently bright orangey flesh color (two or three times we saw black at the tip of the lower mandible, but could not be certain if this was mandible color, or merely an insect carried at the tip of the bill). We both had the impression that these were quite large *Empidonax*. *Behavior:* these birds and others we observed were foraging and singing from ground level to about 4 m up in the lower branches of trees. Unlike many *Empidonaces*, they showed a clear preference for remaining out in the bright sun. If one landed in a shady place, it immediately shifted its position as much as 0.5 m to get back into the sun. When they flipped their tails, unfailingly they first lowered, then raised the tail, a trait of the Gray Flycatcher, the opposite of other *Empidonaces* (Phillips et al. 1964). *Voice*: at the time the non-singing parent bird was feeding the young, three or more flycatchers were singing in the immediate vicinity. I observed one of these from a distance of 8 to 10 m. In plumage it was identical to the first birds observed. It sang constantly, singing one complete song about every five seconds. The song was regular and invariable, with two parts, the second part higher than the first. To me it sounded like choop cheep. To Cheryl's more

discriminating ear, it sounded like ss-pit ss-peet. I listened to the song 40 or more times and the only variation was once when it went choop cheep pit. The range and quality of the voice was somewhat similar to that of a Dusky Flycatcher (*E. oberholseri*) but differed in being divided into discrete, regular two-note units, whereas the Dusky's song (one or two were singing nearby) was more or less continuous, its three or four elements repeated in random sequence. Two or three other birds singing right near the one I was observing were singing an identical song, equally regular and unvaried. The habitat was open Yellow Pine-Garry Oak (*Quercus garryana*)—Douglas-fir (*Pseudotsuga taxifolia*) association, with a bare understory. There was no sagebrush anywhere in this area of open woodland and oak savannah.

In the experience of Harry B. Nehls (pers. comm.), who has studied the species extensively in Oregon, and in most published accounts of the species (e.g. Hoffmann 1927), the presence of some sagebrush is considered an essential ingredient for breeding habitat. However, the two fledglings we watched being fed in Klickitat County indicate nesting occurred close to where we saw them, in an area with no sagebrush. Wenas Park, where Yaich and Larrison made the majority of their sightings, is in a rather similar area of open woodland in which sagebrush is not prominent, though large tracts of sagebrush begin 2-3 km to the east.

In the summer of 1974, alerted birders began searching for the species in Yellow Pine woodland. Wahl (pers. comm.) investigated the Klickitat County area where I had discovered the birds the previous summer and found it "swarming" with Gray Flycatchers, Eugene Hunn (pers. comm.) checked the Wenas Park area and found it similarly "swarming". Bill Tweit (pers. comm.) found several in a stand of yellow pines about 13 km northeast of Wenas Park. Wahl recorded their song in both Klickitat County and Wenas Park.

On 29 June 1974 a male Gray Flycatcher was collected at Wenas Park (specimen to Burke Museum, University of Washington). In-hand characters of this specimen, compared with typical Dusky and Hammond's (*E. hammondii*) Flycatchers (after the key in Phillips and Lanyon 1970), are the following: lower mandible bi-colored, pale yellow basally, dusky tip (nearly always uniformly colored in the Dusky Flycatcher); primary coverts with edges conspicuously paler than their centers (inconspicuous in Dusky); outer web of outer retrix, as seen from above, definitely whitish (unlike Hammond's); bill, measured from anterior edge of nostril, 9.5 mm (over 8.0 mm in the Gray, almost always 7.5 mm or less in Hammond's); tail 59 mm (56.6 mm or more in Gray, 55.0 or less in Hammond's); wing chord 70 mm, for a wing minus tail difference of 11.0 mm (usually more than 7.0 mm in Gray, less than 8.0 mm in Dusky); 10th primary longer than 4th (almost always the reverse in Dusky); 9th primary longer than 6th (about equal in male Dusky).

DISTRIBUTION IN THE STATE

Nehls (pers. comm.) gives the following as the northern limits of the Gray Flycatcher's range in Oregon: "North to the southern base of the Ochoco Mountains in the area about Post and Paulina, skirting the base of the Blue Mountains and east to perhaps Huntington. The western limits are found at the base of the Cascade Range. A finger of the population runs north along the west side of the Deschutes River into the Warm Springs Indian Reservation, but not beyond. On the east side of the river to Madras."

The small population we located in Klickitat County is in a line about 128 km directly north of this northerly extending "finger." This suggests that this is the area where the species funnels into Washington from Oregon, following up the Deschutes River to where it empties into the Columbia River, and from there

proceeding north in Klickitat County to where we found them. This same line continued north another 110 km reaches the Wenas Creek area of Yaich and Larrison's sightings. The eastern slopes of the Cascades would inhibit extension very far west of this line. Mountainous country above Wenas Creek might impede extension north. But Wahl's 1972 sighting suggests the species might conceivably extend east as far as Othello, Adams County, Washington.

The south central Washington locations where the various sightings of Gray Flycatchers have been made are only a small fraction of an extensive area little explored by birders. Further it is an area in which several species of *Empidonax* abound. *Empidonax* flycatchers are difficult, and in particular many Washington birders are unfamiliar with Gray Flycatchers. Furthermore, some of these birds are evidently nesting outside their expected habitat. Nehls (pers. comm.) speaks of this species occurring in Oregon in dense but often widely separated "colonies." There may be a number of these small "colonies" undetected in Washington. Within the area of Klickitat, Yakima, southern Grant, and southwestern Adams counties, careful search of open pine woodland and of pine groves or willow clumps bordering sagebrush from late May into July will probably show the species to be well established in the state, though occurring in widely separated "colonies."

ACKNOWLEDGMENTS

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SECOND RECORD FOR THE PHAINOPEPLA IN COLORADO

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Prior to 1973, the Phainopepla (*Phainopepla nitens*) had been reported in Colorado only once (Bailey and Niedrach, Birds of Colorado, Denver Museum of Natural History, 1965:846). However, on 15 December 1973 we discovered a Phainopepla while participating in the annual Christmas Bird Count in Boulder, Boulder County, Colorado. The bird was observed at length and photographed by us for three days, during which time it was seen by approximately 25 others.

The first sighting of this species in Colorado occurred on 29-30 August 1965 at Platteville in Weld County, approximately 44 km northeast of Boulder. That individual was an immature male and was already showing some glossy black feathers mixed in with its overall gray color. The bird we saw was gray with no traces of black, suggesting that it was a female. The bird was observed at close range and in excellent light, and all of the distinctive field marks—long crest, reddish-brown eye, white wing patch, and faint double wing bar—were clearly visible. The soft, low whistle of the species was heard frequently and further corroborated the identification. The most convincing of several 35 mm transparencies obtained is on deposit with the Official Records Committee of the Colorado Field Ornithologists.

During its stay, the Phainopepla was consistently associated with riparian habitat along Boulder Creek, immediately east (downstream) of the mouth of Boulder Canyon. The area, a city park west of downtown Boulder, lies at an elevation of 1810 m. The habitat of the park, like much of that along Boulder Creek, is a mixture of deciduous trees and dense deciduous brush; the brush was especially favored by the Phainopepla.

The Phainopepla spent much of its time sunning, preening, and foraging in the leaf litter or feeding among the shrubs on wild grapes (*Vitis riparia*) which had not yet dropped from vines. Flying insects were occasionally active above the stream, as they often are in this area on warm days during a mild autumn, and some bouts of flycatching by the Phainopepla were observed. This individual was frequently seen in the company of a Townsend's Solitaire (*Myadestes townsendi*). Often the solitaire would appear first, utter a few call notes in the distance, then arrive at streamside and give its typical warbling song. Shortly thereafter, the Phainopepla would appear and begin foraging near the solitaire; both birds occasionally flew to the water's edge to drink. The reason for this association is speculative at best; perhaps their somewhat similar appearance prompted the fraternization, or the Phainopepla may have been attracted by the solitaire's whistled call notes. On a few occasions, the two seemed to exchange calls. Coincidentally, recent biochemical evidence presented by Sibley (Auk 90:394-410, 1973) suggests a much closer relationship between the Phainopepla and the solitaire than had previously been supposed.

The typical range of this rather sedentary species brings it no closer to north-central Colorado than southern Utah (AOU Check-list 1957). If the Phainopepla occurs more frequently in Colorado, it is probably in the southwestern part of the state, closer to the edge of its range and in more familiar habitat. However, that area is sparsely populated, and a rare straggler could easily be overlooked.

THE SPRAGUE'S PIPIT REACHES CALIFORNIA

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On 19 October 1974 a party of us flushed a Sprague's Pipit *(Anthus spragueii)* from a cutover alfalfa field in the Tijuana River Valley just south of Imperial Beach, San Diego County, California. Additional searching of this field on the 19th revealed at least three Sprague's Pipits, and continued checking of the area during the next two weeks indicated one or two individuals were present through 27 October. On 24 October I collected an adult female weighing 20.3 g from the field, and it is now No. 38980 in the San Diego Natural History Museum.

Other birds present in the alfalfa field were some 250 Water Pipits *(A. spinoletta)*, up to six Red-throated Pipits *(A. cervinus)*, about 50 Savannah Sparrows *(Passerculus sandwichensis)*, at least one Vesper Sparrow *(Pooecetes gramineus)* and a half dozen Chestnut-collared Longspurs *(Calcarius ornatus)*. The Water and Red-throated pipits remained as a flock in areas where the alfalfa was shortest, but the Sprague's Pipits usually remained apart and alone in areas of taller plants. A Sprague's Pipit occasionally moved into the vicinity of the large flock of pipits, but even then did not truly associate with them, acting more as an individual apart from the flock.

The Sprague's Pipits differed slightly in behavior from the other pipits, tending to run rather than fly when approached by an observer. In addition the Sprague's Pipits were not seen to bob their tails as did both the Water and Red-throated pipits. In appearance the Sprague's Pipit more closely resembled the Red-throated than the Water Pipit, however, *spragueii* lacked the bold supercillary and heavy breast streakings of *cervinus*, and had a scaly look to the upperparts instead of the conspicuous streaking of the Red-throated Pipit.

The Sprague's Pipit nests in the prairies of the northern Great Plains, and winters primarily from Texas south to Veracruz in eastern Mexico. It is scarce along the eastern side of the Rocky Mountains, being considered an uncommon straggler to eastern Colorado by Bailey and Niedrach (1965), and reported from only three localities in extreme eastern New Mexico by Hubbard (1970).

West of the Rocky Mountains, Behle and Perry (1975) consider the Sprague's Pipit a rare winter visitant and transient in Utah, based on several sight records for the Salt Lake City and Cedar City areas; Phillips et al. (1964) treat it as rare in Arizona, on the basis of seven records; and Phillips and Amadon (1952) discovered at least four individuals near Sasabe in extreme northern Sonora, Mexico, between 19 and 22 October 1948. Two of the Arizona records are from the extreme western part of the state, with one near Topock on the Colorado River (27 September 1949) and the other on the Tule Desert west of the Sierra Pinta Mountains in extreme southern Yuma County (30 December 1958).

The Sprague's Pipit has been included among the species listed on two Christmas Bird Counts taken in California: the San Bernardino count of 30 December 1962 (Audubon Field Notes 17:284, 1973) and the Orange County (central and coastal) count of 29 December 1968 (AFN 23:417-418, 1969). Christmas Bird Counts, however, contain numerous errors as the results of misidentifications by participants, and poor screening by count compilers. Since no details accompany the reports they are best disregarded. A Sprague's Pipit reported at Lava Beds National Monument in northeastern California on 30 April 1952 (AFN 6:261, 1952) was not even treated as rare, and cannot be considered a valid record. A pipit, believed to be a Sprague's, at Goleta, Santa Barbara County, on 8 October 1964 (AFN 19:80, 1965) was clearly not a Water Pipit, but the description of the bird does not rule out the possibility of a Red-throated Pipit which now

appears more likely. The birds at Imperial Beach in 1974 must therefore be considered the only valid record to date for California.

Considering the bird's normal range, and its continued occurrence in Arizona (see Am. Birds 28:87-90, 1974 and personal observation of ca. 10 at the mouth of Gardner Canyon in Pima County 5 February 1972), we can expect additional Sprague's Pipits to appear in California. However, observers must treat all records with caution, for Red-throated Pipits do occur somewhat regularly, and the Pechora Pipit *(A. gustavi)* is a potential straggler to the state.

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BLACK-THROATED BLUE WARBLER IN UTAH

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On 27 September 1974 we collected a male Black-throated Blue Warbler *(Dendroica caerulescens)* in immature plumage at the headquarters of the Desert Experimental Range (1,601 m elev.) in Millard Co., Utah, 75.6 km west of Milford. The specimen (No. 5369, Brigham Young Univ. Life Science Museum, Provo, Utah) weighed 10 g. It was assigned to the race *caerulescens* by Mrs. Roxie C. Laybourne of the National Fish and Wildlife Laboratory, U.S. National Museum. All but the frontal portions of the bird's skull were 2-layered and pneumatosized. The warbler, in company with Yellow-rumped (Audubon's) Warblers *(Dendroica coronata)*, was in a planted windbreak of Juniper, Russian Olive, Honey Locust, Black Locust, and Siberian Elm adjacent to the buildings and near a small permanent source of water.

This apparently is the first specimen of this warbler collected from the state of Utah, although several sight records have been reported. Charles Lockerbie and Guy Emerson noted the species at Salt Lake City, Salt Lake Co., on 24 October 1953 (Scott, Audubon Field Notes 8:33, 1954), William H. Behle recorded one in South Willow Canyon, Stansbury Mountains, Tooele Co., Utah, on 16 October 1955 and three were seen in 1963 near Cedar City, Iron Co., by Stewart Murie on 20 May, 19 August and 10 September (Behle and Perry, Utah birds: Check-list, seasonal and ecological occurrence charts and guides to bird finding. Utah Mus. Nat. Hist., Univ. Utah, 1975). This species, along with other species of eastern warblers, seemingly has been observed in the western United States more frequently in recent years than formerly; this has been attributed to more observers in the field now than previously (Austin, Condor 73:455, 1971). The several Utah records probably are a part of this phenomenon.

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